

WHAT IS CLAIMED IS:

1. A system for controlling access to a resource of a computer system, comprising:

a database of problems and corresponding precalculated solutions;

a problem retriever that responds to a request from a client for access to said resource by retrieving one of said problems from said database and transmitting said one of said problems to said client; and

a solution evaluator that, upon receiving a putative solution from said client, employs said database to validate said putative solution and, if said putative solution is valid, grants said client access to said resource.

2. The system as recited in Claim 1 wherein said problems comprise outputs and portions of corresponding inputs to a one-way function.

3. The system as recited in Claim 2 wherein said one-way function is a Message Digest-5 function.

4. The system as recited in Claim 1 wherein said problem retriever replaces said one of said problems and a corresponding

3 one of said solutions when said putative solution is valid.

5. The system as recited in Claim 1 wherein said problem
2 retriever replaces said one of said problems and a corresponding
3 one of said solutions only when said putative solution is valid.

6. The system as recited in Claim 1 wherein said solution
2 evaluator grants said client access to said resource by allocating
3 memory associated with said resource to serve said client..

7. The system as recited in Claim 1 wherein said resource is
selected from the group consisting of:

- a network server,
- an electronic mail server, and
- a main database.

8. A method of controlling access to a resource of a computer system, comprising:

creating a database of problems and corresponding precalculated solutions;

responding to a request from a client for access to said resource by retrieving one of said problems from said database and transmitting said one of said problems to said client;

upon receiving a putative solution from said client, employing said database to validate said putative solution; and

if said putative solution is valid, granting said client access to said resource.

9. The method as recited in Claim 8 wherein said problems comprise outputs and portions of corresponding inputs to a one-way function.

10. The method as recited in Claim 9 wherein said one-way function is a Message Digest-5 function.

11. The method as recited in Claim 8 further comprising replacing said one of said problems and a corresponding one of said solutions when said putative solution is valid.

12. The method as recited in Claim 8 further comprising

2 replacing said one of said problems and a corresponding one of said
3 solutions only when said putative solution is valid.

13. The method as recited in Claim 8 wherein said granting
2 comprises allocating memory associated with said resource to serve
3 said client.

14. The method as recited in Claim 8 wherein said resource is
2 selected from the group consisting of:

3 a network server,
an electronic mail server, and
a main database.

15. A system for controlling access to a resource of a
2 computer system, comprising:

3 a database of problems and corresponding precalculated
4 solutions;

5 a pointer that points to a particular problem/solution entry
6 in said database;

7 a problem retriever that responds to a request from a client
8 for access to said resource by retrieving one of said problems from
9 said database according to said pointer and transmitting said one
10 of said problems and said pointer to said client; and

11 a solution evaluator that, upon receiving a putative solution
12 and said pointer from said client, employs said database and said
13 pointer to validate said putative solution and, if said putative
14 solution is valid, grants said client access to said resource.

16. The system as recited in Claim 15 wherein said problems
comprise outputs and portions of corresponding inputs to a one-way
3 function.

17. The system as recited in Claim 16 wherein said one-way
2 function is a Message Digest-5 function.

18. The system as recited in Claim 15 wherein said problem
2 retriever replaces said one of said problems and a corresponding

3 one of said solutions when said putative solution is valid.

19. The system as recited in Claim 15 wherein said problem
2 retriever replaces said one of said problems and a corresponding
3 one of said solutions only when said putative solution is valid.

20. The system as recited in Claim 15 wherein said solution
2 evaluator grants said client access to said resource by allocating
3 memory associated with said resource to serve said client.

21. The system as recited in Claim 15 wherein said resource
is selected from the group consisting of:

- a network server,
- an electronic mail server, and
- a main database.